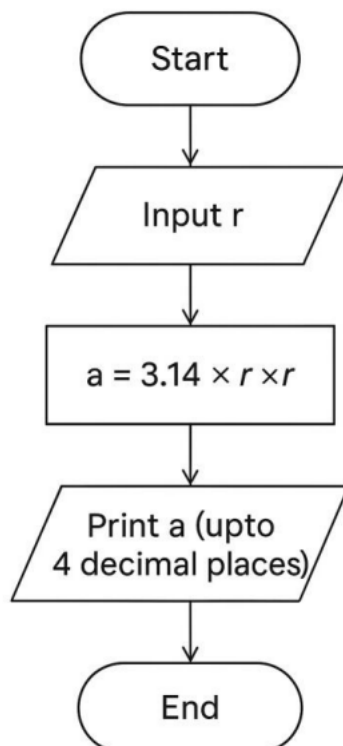


EXPERIMENT 1.1.1- AREA OF CIRCLE

ALGORITHM:

**Start****Input:** Read the radius (r).**Process:** Calculate the area by multiplying  $3.14 * r * r$ .**Output:** Print the result (formatted to 4 decimal places).**Stop**

FLOWCHART:

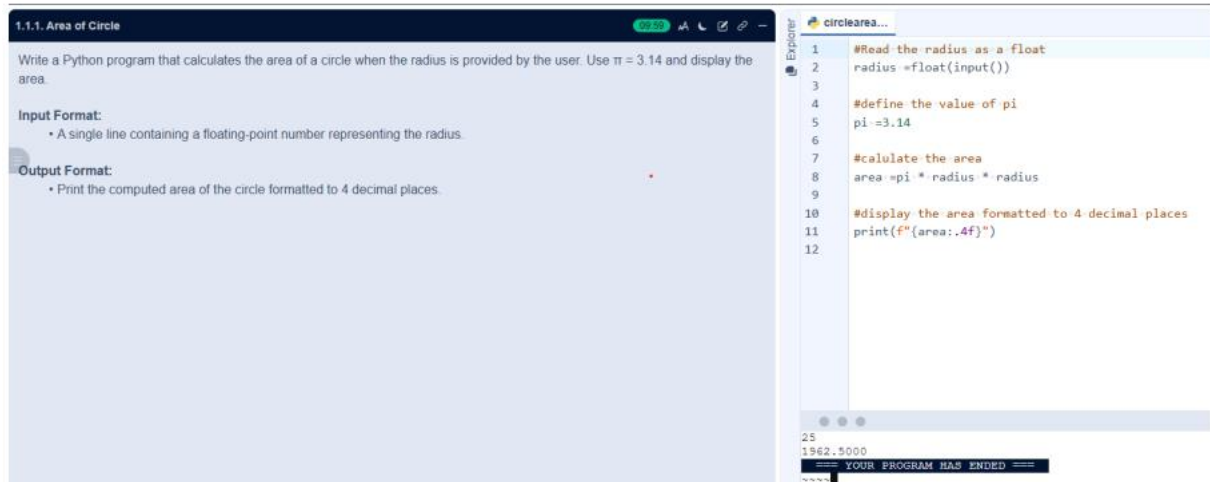


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SEC-C1

CODE:



The screenshot shows a Python IDE with a dark theme. The left pane displays the problem statement for "1.1.1. Area of Circle". The right pane shows the Python code for "circlearea.py". The bottom pane shows the program's output and a status message.

**1.1.1. Area of Circle**

Write a Python program that calculates the area of a circle when the radius is provided by the user. Use  $\pi = 3.14$  and display the area.

**Input Format:**

- A single line containing a floating-point number representing the radius.

**Output Format:**

- Print the computed area of the circle formatted to 4 decimal places.

**circlearea.py**

```
1 #Read the radius as a float
2 radius=float(input())
3
4 #define the value of pi
5 pi=3.14
6
7 #calculate the area
8 area=pi * radius * radius
9
10 #display the area formatted to 4 decimal places
11 print(f"{area:.4f}")
12
```

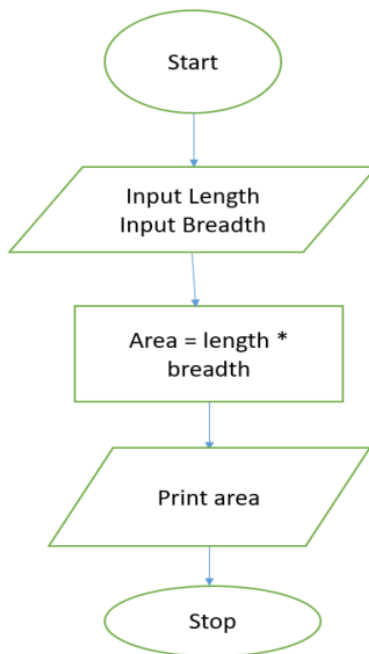
25  
1562.5000  
== YOUR PROGRAM HAS ENDED ==

EXPERIMENT 1.1.2- AREA OF RECTANGLE

## ALGORITHM:

**Start****Input:** Read length and width.**Process:** Calculate the area by multiplying length \*width.**Output:** Print the result (formatted to 2 decimal places).**Stop**

## FLOWCHART:



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CODE:

The screenshot shows a Python IDE with a dark theme. The main editor window is titled "1.1.2. Area of Rectangle" and contains the following text:

Write a Python program to calculate the area of a rectangle given its length and width.

**Formula:**  
Area of Rectangle = Length  $\times$  Width

**Input Format:**

- First line contains a float value representing the length of the rectangle
- Second line contains a float value representing the width of the rectangle

**Output Format:**

- Print the area of the rectangle as a float value formatted to 2 decimal places.

On the right side, there is a file explorer showing a file named "areaOfRe...". Below it, the code editor shows the following Python code:

```
1 length=float(input())
2 width=float(input())
3 area = length * width
4 print(f"{area:.2f}")
```

At the bottom right, there is a terminal window showing the output of the program:

```
20
20
400.00
```

Below the terminal, there is a status bar that says "YOUR PROGRAM HAS ENDED".

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EXPERIMENT 1.1.3- CALCULATE THE AREA OF SQUARE

ALGORITHM:

**Start**

**Input:** Read the value for side\_length from the user.

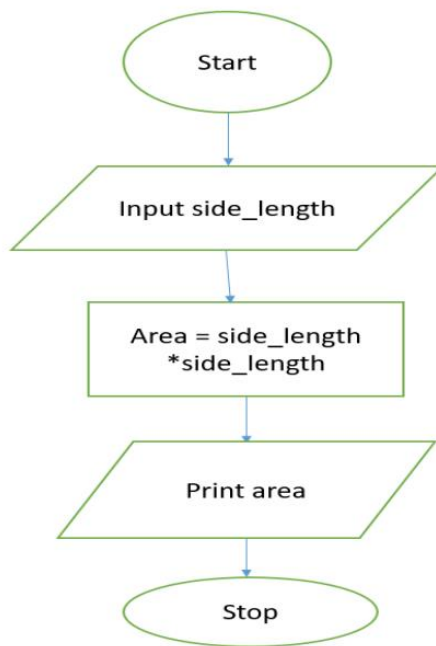
**Process:** Convert the input value to an integer.

**Calculation:** Calculate the area using the formula:  $\text{Area} = \text{side\_length}^2$

**Output:** Print the calculated area.

**Stop**

## FLOWCHART:



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SEC-C1

## CODE:

The screenshot shows a Python IDE with a file named 'AreaSqua...'. The code in the editor is as follows:

```
1 side_length=int(input())
2 area=side_length * side_length
3 print(area)
```

The IDE also displays instructions for the task: '1.1.3. Calculate Area of the Square'. It asks the user to write a Python program that prompts the user to enter the *side\_length* of a square and computes the area of the square. The formula provided is  $\text{Area} = \text{side\_length}^2$ . The input format is specified as a positive integer value representing the *side\_length* of the square. The output format is specified as a positive integer value representing the area of the square.

At the bottom of the IDE, the status bar shows '720 518400' and 'YOUR PROGRAM HAS ENDED'.

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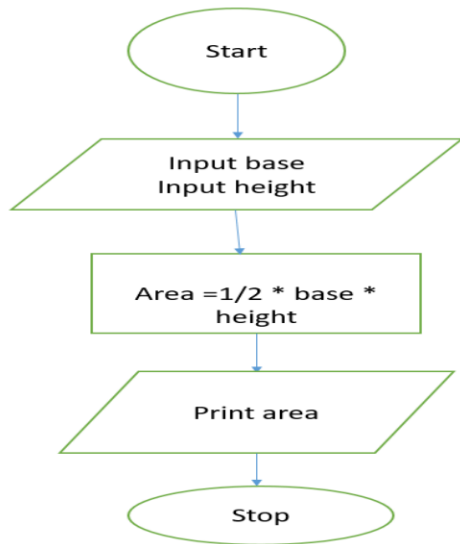
EXPERIMENT 1.1.4- AREA OF TRIANGLE

ALGORITHM:

- Start
- Input base
- Input height
- Compute area =  $0.5 \times \text{base} \times \text{height}$

- Display area (rounded to 2 decimal places)
- End

FLOWCHART:





## CODE:



**1.1.4. Area of Triangle**

Write a Python program that prompts the user to enter the triangle's base and height and computes the triangle's area.

**Formula:**  $Area\ of\ Triangle = 0.5 \times base \times height$ .

**Input Format:**

- The first line of input is the float value that represents the base of the triangle.
- The second line of input is the float value that represents the height of the triangle.

**Output Format:**

- The output is the floating point value that represents the area of a triangle, formatted to two decimals.

```
1 base=float(input())
2 height=float(input())
3 area_of_triangle=0.5*base*height
4 print(f'{area_of_triangle:.2f}')
```

67  
4  
134.00

==== YOUR PROGRAM HAS ENDED ====

NIRMAYEE S. KADAM

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SEC-C1

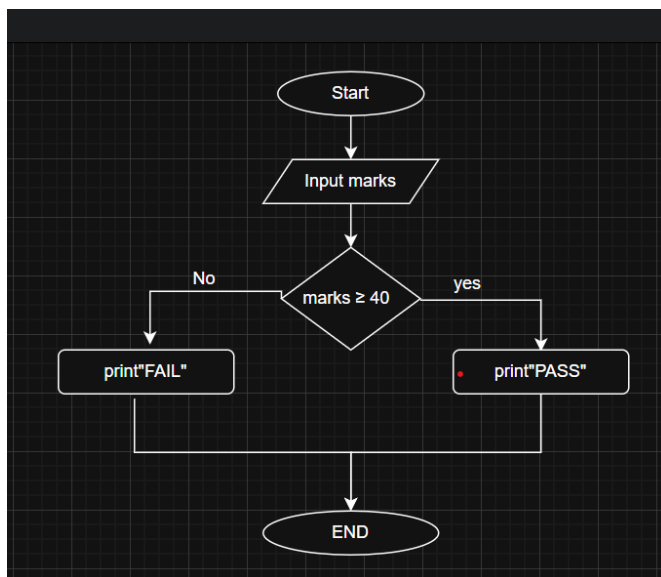
EXPERIMENT 1.1.5- Student pass or fail status

## ALGORITHM:

### Start

1. **Read** the student's marks (let's call the variable marks).
2. **Check** if marks is greater than or equal to the passing threshold (e.g., 40).
3. **If condition is True:**
4. Print "PASS"
5. **If condition is False:**
6. Print "FAIL"
7. **Stop**

## FLOWCHART:



## CODE:

The screenshot shows a code editor with a problem description on the left and a Python solution on the right. The problem is titled "1.1.5. Student Pass or Fail Status" and asks for a Python program to determine if a student passed or failed an exam based on their marks. The criteria are: a student passes if marks are greater than or equal to 40, and fails if marks are less than 40. The input format is a single line containing an integer representing the marks. The output format is to print "Pass" if the student passed and "Fail" if the student failed. The Python code on the right implements this logic using an if-else statement.

```
1.1.5. Student Pass or Fail Status

Write a Python program to determine whether a student passed the exam or not based on their marks.

Pass/Fail Criteria:
• A student passes if marks  $\geq$  40
• A student fails if marks  $<$  40

Input Format:
• Single line contains an integer representing the marks obtained by the student.

Output Format:
• Print "Pass" if the student passed the exam.
• Print "Fail" if the student failed the exam.
```

```
passOrFa...
1 marks = int(input())
2 if marks >= 40:
3     print("Pass")
4 else:
5     print("Fail")

57
Pass
===== YOUR PROGRAM HAS ENDED =====
```